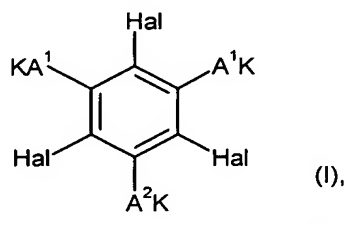
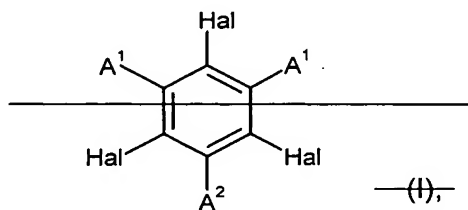


The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

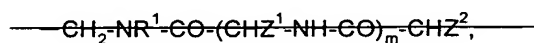
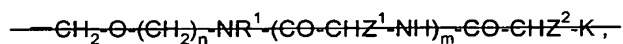
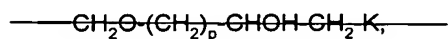
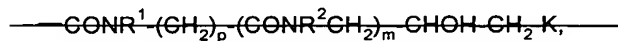
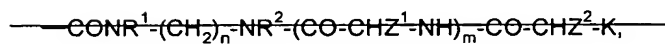
1. (Currently Amended) ~~Metal complexes of general A~~ A metal complex of formula I

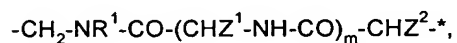
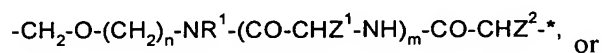
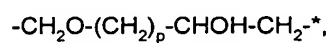
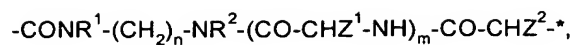


in which

Hal stands for bromine or iodine,

A¹ stands for ~~the radicals~~





A^2 independently has the same meaning as A^1 or in the case that A^1 has the meaning first mentioned above can also stand for the radical $\text{-NR}^1\text{-CO-(NR}^1\text{)}_m\text{-(CH}_2\text{)}_p\text{-NR}^2\text{-(CO-CHZ}^1\text{-NH)}_m\text{-CO-CHZ}^2\text{-K}$, in which $\text{-NR}^1\text{-CO-(NR}^1\text{)}_m\text{-(CH}_2\text{)}_p\text{-NR}^2\text{-(CO-CHZ}^1\text{-NH)}_m\text{-CO-CHZ}^2\text{-*}$,

* designates the binding site to K.

R^1 and R^2 mean, independently of one another, ~~mean~~ a hydrogen atom, a C_1 - C_2 -alkyl group or a monohydroxy- C_1 - C_2 -alkyl group,

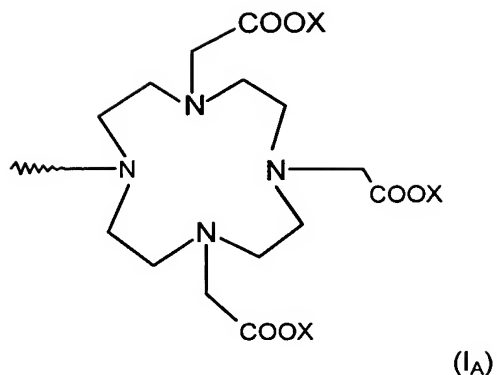
Z^1 and Z^2 mean, independently of one another, ~~mean~~ a hydrogen atom or a methyl group,

n means the ~~numbers~~ number 2-4,

m means the ~~numbers~~ number 0 or 1 and

p means the ~~numbers~~ number 1-4,

K stands for a macrocyclic compound of formula I_A



with X ~~in the~~ meaning of a hydrogen atom or a metal ion equivalent of atomic numbers 20-29, 39, 42, 44 or 57-83, provided that at least two X stand for metal ion ~~equivalents~~ equivalents, and optionally present free carboxy groups optionally are present as salts of organic and/or inorganic bases or amino acids or amino acid amides.

2. (Currently Amended) ~~Metal complexes~~ A metal complex according to claim 1, ~~characterized in that~~ wherein A¹ stands for a group:

- CONH(CH₂)_{2,3}NHCOCH₂NHCOCH(CH₃)-,
- CONH(CH₂)_{2,3}NHCOCH₂NHCOCH₂-,
- CONH(CH₂)_{2,3}NHCOCH₂-,
- CONH(CH₂)_{2,3}NHCOCH(CH₃)-,
- CONHCH₂CH(OH)CH₂-,
- CON(CH₃)CH₂CH(OH)CH₂-,
- CH₂OCH₂CH(OH)CH₂-,
- CONHCH₂CONHCH₂CH(OH)CH₂-,
- CH₂NHCOCH₂-,

$\text{-CH}_2\text{NHCOCH(CH}_3\text{)-}$,
 $\text{-CH}_2\text{NHCOCH}_2\text{NHCOCH}_2\text{-}$,
 $\text{-CH}_2\text{NHCOCH}_2\text{NHCOCH(CH}_3\text{)-}$,
 $\text{-CH}_2\text{O(CH}_2\text{)}_2\text{NHCOCH}_2\text{-}$,
 ~~$\text{-CON(CH}_2\text{CH}_2\text{OH(CH}_2\text{)}_2\text{NHCOCH}_2\text{-}$~~ ,
 $\text{-CON(CH}_2\text{CH}_2\text{OH)CH}_2\text{CH}_2\text{NHCOCH}_2\text{-}$, or
 $\text{-CH}_2\text{O(CH}_2\text{)}_2\text{N(CH}_2\text{CH}_2\text{OH)COCH}_2\text{-}$.

3. (Currently Amended) ~~Metal complexes~~ A metal complex according to claim 1, wherein A^2 stands for $[[a]]$

$\text{-NHCOCH}_2\text{NHCOCH}_2\text{NHCOCH(CH}_3\text{)-}$,
 $\text{-NHCOCH}_2\text{NHCOCH}_2\text{NHCOCH}_2\text{-}$,
 $\text{-NHCOCH}_2\text{NHCOCH}_2\text{-}$,
 $\text{-NHCOCH}_2\text{NHCOCH(CH}_3\text{)-}$,
 $\text{-N(CH}_3\text{)COCH}_2\text{NHCOCH}_2\text{-}$,
 ~~$\text{-NHCONH(CH}_2\text{)}_2\text{NHCONH}_2\text{-}$~~ ,
 $\text{-NHCONH(CH}_2\text{)}_2\text{NHCOCH}_2\text{-}$,
 $\text{-NHCOCH}_2\text{N(CH}_2\text{CH}_2\text{OH)COCH}_2\text{-}$, or
 $\text{-N(CH}_3\text{)COCH}_2\text{N(CH}_2\text{CH}_2\text{OH)COCH}_2\text{-}$.

4. (Currently Amended) ~~Metal complexes~~ A metal complex according to claim 1, wherein at least one X stands for a metal ion equivalent of atomic numbers 21-29, 42, 44, or 58-70.

5. (Currently Amended) ~~Metal complexes~~ A metal complex according to claim 4,

wherein at least one X stands for a metal ion equivalent of ~~the ions~~ gadolinium(III), dysprosium(III), europium(III), iron(III) or manganese(II).

6. (Currently Amended) ~~Pharmaceutical agents that contain~~ A pharmaceutical composition that contains at least one metal complex ~~of general formula according to claim 1;~~ optionally with the and one or more additives ~~that are commonly used~~ suitable for use in a galenical formulation ~~galenicals~~.

7. (Currently Amended) ~~Use of~~ A method of x-ray diagnosis comprising administering to a patient at least one metal complex according to claim 1 ~~for the production of agents for x-ray diagnosis and performing x-ray diagnosis.~~

8. (Currently Amended) ~~Use of~~ A method of MRT diagnosis comprising administering to a patient at least one metal complex according to claim 4 ~~for the production of agents for MRT diagnosis and performing MRT diagnosis.~~

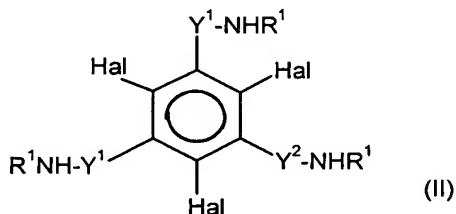
9. (Currently Amended) ~~Pharmaceutical agents that each contain~~ A pharmaceutical composition that contains a metal complex according to ~~claims 1 and 4~~ claim 1 in a molar ratio of 2000:1 to 1:1, ~~preferably 49:1 to 4:1.~~

10. (Currently Amended) ~~Pharmaceutical agents~~ A pharmaceutical composition according to claim 6, wherein ~~the metal complex(es)~~ said at least one metal complex is dissolved or suspended in water or in a physiologically acceptable ~~physiological~~ salt solution ~~is (are) present~~ at a concentration of 0.001 to 1 mol/l.

11. (Currently Amended) ~~Use of at least one metal complex according to claim 1 for the production of agents for~~ A method for x-ray diagnosis and or MR diagnosis of a cerebral infarctions and tumors of the liver or space-occupying processes in the liver as well as tumors of the abdomen (including the kidneys) and the musculo-skeleton system and especially advantageously, the compounds can be used for the visualization of blood vessels after intraarterial and also intravenous injection infarction, a tumor of the liver, a space-occupying process in the liver, a tumor of the abdomen, a kidney, a muscle-skeleton system, or a blood vessel, comprising administering to a patient at least one metal complex according to claim 1, and performing x-ray diagnosis or MR diagnosis.

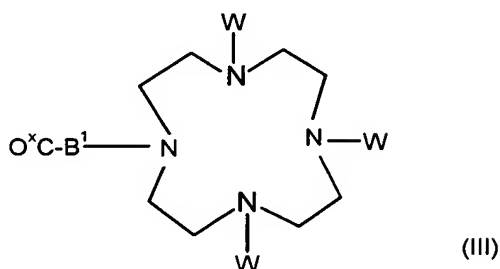
12. (Currently Amended) ~~Process for the production of the metal complexes of general formula I~~ A process for preparing a metal complex according to claim 1, ~~wherein~~ comprising

- a) reacting a triiodo- or tribromoaromatic compound of ~~general~~ formula II



is reacted in a way that is known in the art with a macrocyclic compound of general formula

III



in which

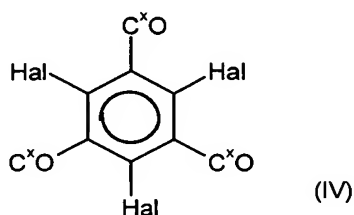
O^x stands for a $-COOH$, $-COOH$ or activated carboxyl group,

W stands for a protective group or a $-CH_2COOX^*$ group with X^* in the meaning of X as defined in claim 1 or a protective group and $-Y^1-NR^1-CO-B^1-$, which forms upon reaction of a Y^1NHR^1 group of a compound of formula II with the O^xCB^1- group of a compound of formula III, stands for the radical A^1 in the meaning of $-CO-NR^1-(CH_2)_n-NR^2-$, $(CO-CHZ^1-NH)_m-CO-CHZ^2-$ or $-CH_2-O-(CH_2)_n-NR^1-(CO-CHZ^1-NH)_m-CO-CHZ^2-$ and $Y^2-NR^1-CO-B^1$ for $Y^1-NR^1-CO-B^1$, $-Y^2-NR^1-CO-B^1-$, which forms upon reaction of the Y^2NHR^1 group of a compound of formula II with the O^xCB^1- group of a compound of formula III, stands for $-Y^1-NR^1-CO-B^1-$ or for the case that $Y^1-NR^1-CO-B^1$ has the meaning first mentioned above, the latter also stands for $-NR^1-CO-(NR^1)_m(CH_2)_p-NR^2-(CO-CHZ^1-NH)_m-CO-CHZ^2-$, whereby B^1 means the radical on the first or second (viewed from K) carbonyl group between $-CO$ and K, and Y^1 or Y^2 stands for the deficient radical of the linker group that is reduced by one imino group,

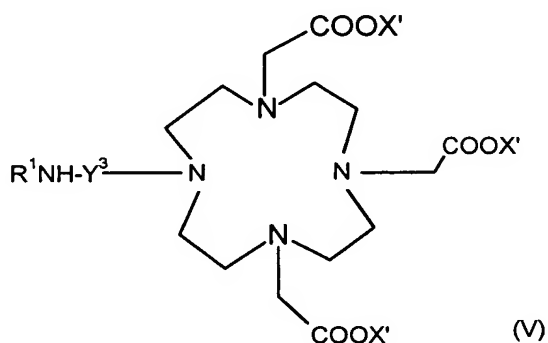
and then optionally removing protective group W is removed and introducing the radical CH_2COOX_1 is introduced in a way that is known in the art or optionally removing the protective group that optionally stands for X^* is removed and then reacted in a way that is

~~known in the art~~ reacting with a metal oxide or metal salt of an element of atomic numbers 20-29, 39, 42, 44 or 57-83, or

b) reacting a triiodo- or tribromoaromatic compound of ~~general~~ formula IV



~~is reacted in a way that is known in the art~~ with a macrocyclic compound of ~~general~~ formula V

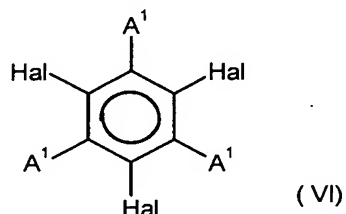


in which -C^xO and X' have the above-mentioned meaning and ~~-CO-NR¹-Y³~~ -CO-NR¹-Y³-, which forms upon reaction of the Y³NHR¹ group of a compound of formula V with the O^xC- group of a compound of formula IV, stands for radical A¹ in the meaning of -CONR¹-(CH₂)_p-(CONR²CH₂)_m-CH(OH)CH₂-, and thus Y³ is in the meaning of ~~NR¹-(CH₂)_p-(CONR²CH₂)_m-CH(OH)CH₂-~~

and then optionally removing the protective group that ~~optionally~~ stands for X' is removed and then ~~is reacted~~ reacting in a way that is known in the art with a metal oxide or

metal salt of an element of atomic numbers 20-29, 39, 42, 44 or 57-83, or

c) reacting a triiodo- or tribromoaromatic compound of ~~general~~ formula VI

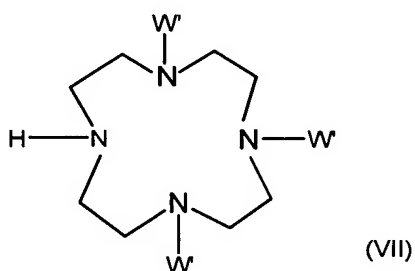


in which

A¹ stands for a radical $\text{—CH}_2\text{—O—(CH}_2\text{)}_p\text{—CH—CH}_2\text{—}$

~~A¹ stands for a radical $\text{—CH}_2\text{—O—(CH}_2\text{)}_p\text{—CH—CH}_2\text{—}$~~

~~is reacted in a way that is known in the art~~ with a cyclene of general formula VII

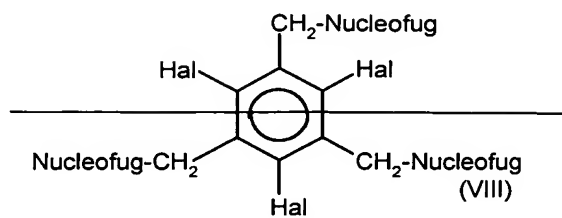


in which W' stands for a hydrogen atom or a protective group,

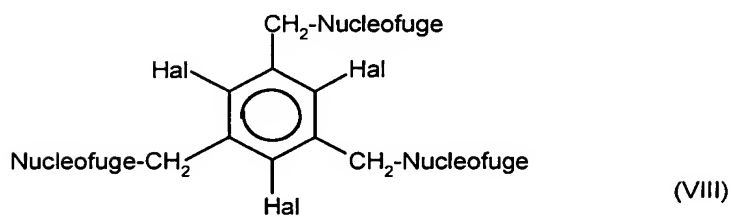
~~after removing the optionally present protective groups have been removed and then~~
~~introducing~~ radical $\text{—CH}_2\text{COOX}$ ~~has been introduced in a way that is known in the art,~~ to form
a metal complex of ~~general~~ formula I with A in the meaning of radical $\text{—CH}_2\text{—O—(CH}_2\text{)}_p\text{—}$

CHOH-CH₂-₁ or

d) reacting a triiodo- or tribromoaromatic compound of ~~general~~ formula VIII

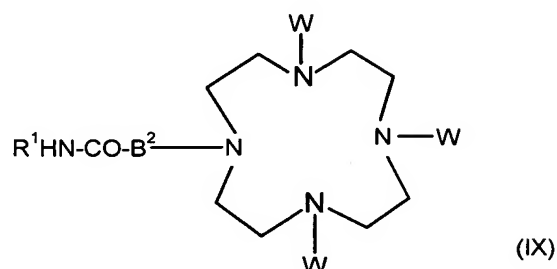


~~[Nucleofug = nucleofuge]~~



in which ~~nucleofuge~~ Nucleofuge stands for a nucleofuge group,

is reacted in a way that is known in the art with a macrocyclic compound of general formula IX



in which

R^1 and W have the above-mentioned meanings, and B^2 stands for the radical $-(CHZ^1-NHCO)_m-CHZ^2-$, and then further processing and then is further processed as indicated under a), such that metal complexes of general formula I are obtained with A^1 in the meaning of radical $-CH_2-NR^1-CO-(CHZ^1-NHCO)_m-CHZ^2$,

~~whereby then optionally~~ in the metal complexes, obtained according to a)-d), of general formula I, still present acid hydrogen atoms are optionally substituted by cations of inorganic or organic bases, amino acids or amino acid amides.

13. (Currently Amended) ~~Process for the production of the pharmaceutical agents A~~
process for preparing a pharmaceutical composition according to claim 6, wherein the
~~complex compound that is dissolved or suspended in water or physiological salt solution,~~
~~optionally with the additives that are commonly used in galenicals, is brought into a suitable~~
~~form for enteral or parenteral administration comprising bringing into a composition said at~~
least one metal complex and the one or more additives suitable for use in a galenical
formulation.

14. (New) A pharmaceutical composition according to claim 6, which is in a suitable form for enteral or parenteral administration.

15. (New) A metal complex according to claim 1, wherein A¹ stands for

-CONH(CH₂)_{2,3}NHCOCH₂NHCOCH(CH₃)-,

-CONH(CH₂)_{2,3}NHCOCH₂NHCOCH₂-,

-CONH(CH₂)_{2,3}NHCOCH₂-,

-CONH(CH₂)_{2,3}NHCOCH(CH₃)-,

-CONHCH₂CH(OH)CH₂-,

-CON(CH₃)CH₂CH(OH)CH₂-,

-CH₂OCH₂CH(OH)CH₂-,

-CONHCH₂CONHCH₂CH(OH)CH₂-,

-CH₂NHCOCH₂-,

-CH₂NHCOCH(CH₃)-,

-CH₂NHCOCH₂NHCOCH₂-,

-CH₂NHCOCH₂NHCOCH(CH₃)-,

-CH₂O(CH₂)₂NHCOCH₂-, or

-CH₂O(CH₂)₂N(CH₂CH₂OH)COCH₂-.

16. (New) A metal complex according to claim 1, wherein A² stands for

-NHCOCH₂NHCOCH₂NHCOCH(CH₃)-,

-NHCOCH₂NHCOCH₂NHCOCH₂-,

-NHCOCH₂NHCOCH₂-,

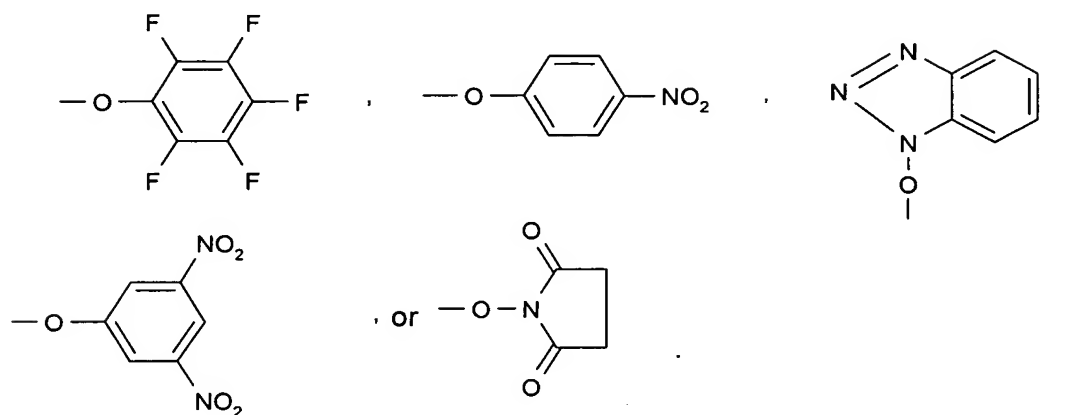
-NHCOCH₂NHCOCH(CH₃)-,

-N(CH₃)COCH₂NHCOCH₂-,

-NHCOCH₂N(CH₂CH₂OH)COCH₂-, or
 -N(CH₃)COCH₂N(CH₂CH₂OH)COCH₂-.

16. (New) A process according to claim 12, wherein the nucleofuge group is

F, Cl, Br, I, —OTs, —OMs, OH,



17. (New) A pharmaceutical composition that contains a metal complex according to claim 1 in a molar ratio of 49:1 to 4:1.

18. (New) A process according to claim 12, wherein the nucleofuge group is

F, Cl, Br, I, OH ,

